Affordable Micro Irrigation Technologies (AMIT)- raising some important questions

Project team: ITC, IDE India, EDA Rural Systems (India), ITDG (Southern Africa) & HR Wallingford

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Study areas: INDIA - (Bihar, West Bengal) (Maharastra, HP); ZIMBABWE - Masvingo



Aim of presentation

To stimulate discussion on the marketdriven approach for micro-irrigation technologies



Project Purpose

To understand the impact of AMITs on the livelihoods of resource-poor farmers and assess the use of a market-driven approach in the dissemination of these technologies



Research Questions

- Q1. Do AMITs offer sustainable technical and financial benefits to the users when compared with conventional irrigation practices?
- Q2. Whose livelihoods can be enhanced by purchasing AMIT, in what way and by how much?
- Q3. What are the constraints and opportunities of a market-oriented approach to support the sustainable adoption of AMIT by the poor?
- Q4. How transferable are the technologies and the approach to other locations?



Research Question 1

Do AMITs offer sustainable technical and financial benefits to the users when compared with conventional irrigation practices?



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"I draw clean water from a borehole, but I wonder why my emitters get blocked so often. I therefore spend more time attending to these emitters than I do when I use my can. It has actually become a liability to my production programme."

Mrs Ndigwirei, Primary school teacher, Zimbabwe





"You really need to be innovative in order to make profit with the technology. I had to lay the laterals on sticks to minimise blockage of the micro-tubes."

Mr Mangwiro, Farmer, Zimbabwe



Indicative Answer to Q1:

- * AMIT systems are complex farmers require long-term support
- * High drop-off rate of farmers:
 - Requires change to farming system
 - Inconvenient labour requirements
 - Plot too small
 - Fear of theft
- * Further research required to determine the sustainability and replicability



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Research Question 2

Whose livelihoods can be enhanced by purchasing AMIT, in what way and by how much?



Indicative answer to Q2:

Not the poorest

- Self-sufficient and farmers with surplus. We have not yet been able to confirm whether poorer farmers adopt later
- Most beneficial at the household level (Home gardens)
- This year's research in India and Zimbabwe will provide further information



Research Question 3

What are the constraints and opportunities of a market-oriented approach to support the sustainable adoption of AMIT by the poor?



Indicative answer to Q3:

There are a number of issues:

1) High costs of R&D and of mass promotion methods

- 2) High level of post-installation support requires significant human & financial inputs not necessarily provided by the market
- 3) The role of NGOs and the subsidy they represent (not driven or supported by the market)
- 4) Significant costs of establishing and supporting a marketing chain before it becomes self-sustaining



Research Question 4

How transferable are the technologies and the approach to other locations?



Indicative answer to Q4:

- Approach requires the medium or long term presence of a dedicated organisation with considerable financial & human resources
- AMITs require more training and on-going technical support than the dissemination of a technology such as the Treadle Pump
- This proposed network could play an important role in supporting technology dissemination but the need for a wellresourced, dedicated agency on the ground cannot be avoided



Conclusion

The research questions remain valid - this network presents a valuable opportunity to address them further

If well supervised and supported the market-driven approach to micro-irrigation can deliver technical and financial benefits but:

1) It takes considerable donor investment for the marketing method to be viable

2) Need for on-the-ground support

3) Sustainability is not yet clear

